CLAIM AMENDMENTS:

Pending Claims

Claims 1-3 (Canceled).

Claim 4 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 wherein said first and second detectors are coupled to said aircraft fuselage and are directed towards said first and second rotors respectively.

Claim 5 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 wherein said first and second detectors are coupled to said first and second rotors respectively and are directed towards said aircraft fuselage.

Claim 6 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 wherein said first and second detectors detect infrared energy of said first and second rotors respectively.

Claim 7 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 wherein said first and second detectors detect ultraviolet energy of said first and second rotors respectively.

Claim 8 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 wherein said first and second detectors detect infrared energy of at least a portion of said aircraft fuselage.

Claim 9 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 wherein said first and second detectors detect ultraviolet energy of at least a portion of said aircraft fuselage.

Claim 10 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 further comprising first and second emitters, said first and second detectors generating said rotor signals in response to emitted energy from said first and second emitters respectively.

Claim 11 (Previously Presented): A vertical takeoff and landing aircraft as in claim 10 wherein said first emitter is an infrared emitter or an ultraviolet emitter.

Claim 12 (Previously Presented): A vertical takeoff and landing aircraft as in claim 10 wherein:

said first detector generates a first rotational position signal indicative of a first position of said first rotor in response to emitted energy from said first emitter; and

said second detector generates a second rotational position signal indicative of a second position of said second rotor in response to emitted energy from said second emitter.

Claim 13 (Canceled).

Claim 14 (Withdrawn): A vertical takeoff and landing aircraft as in claim 3 further comprising a plurality of emitters, said plurality of detectors generating said rotor signals in response to reflected energy generated from said plurality of emitters.

Claim 15 (Withdrawn): A vertical takeoff and landing aircraft as in claim 14 further comprising at least one reflective device reflecting energy emitted from said plurality of emitters towards said plurality of detectors.

Claim 16 (Withdrawn): A vertical takeoff and landing aircraft as in claim 14 wherein said plurality of emitters and said plurality of detectors are coupled to said aircraft fuselage.

Claim 17 (Withdrawn): A vertical takeoff and landing aircraft as in claim 14 wherein said plurality of emitters and said plurality of detectors are coupled to said plurality of rotors.

Claim 18 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 wherein said controller adjusts the rotational speed of said first rotor by adjusting ~~in~~ gas flow to said first rotor.

Claim 19 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 further comprising at least one gas control valve, said controller adjusting the rotational speed of said via control of said at least one gas control valve.

Claim 20 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 further comprising at least one brake, said controller adjusting the rotational speed of said via control of said at least one brake.

Claim 21 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 further comprising at least one drag device, said controller adjusting the rotational speed of said via control of said at least one drag device.

Claim 22 (Previously Presented): A vertical takeoff and landing aircraft as in claim 21 wherein said at least one

drag device is selected from a group consisting of a flap, a slat, a flaperon, an aileron, a spoiler, a drag plate, and a split aileron.

Claim 23 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 wherein said controller switches said first and second rotors between a vertical lift mode and a fixed wing mode.

Claim 24 (Canceled).

Claim 25 (Previously Presented): A vertical takeoff and landing aircraft as in claim 42 wherein said first and second rotors are tandem rotor/wings.

Claims 26-40 (Canceled).

Claim 41 (Currently Amended): A rotor rotational position-adjusting system for a vertical takeoff and landing aircraft comprising:

a first detector that generates rotor signals when a blade of a first rotor of the aircraft passes through a first rotational position;

a second detector that generates rotor signals when a blade of a second rotor of the aircraft passes through a second rotational position; and

a controller coupled to said first and second detectors to receive said rotor signals, wherein said controller is programmed to determine ~~determines~~ the relative rotational position of said first and second rotors as a function of said rotor signals, compare ~~compares~~ said relative rotational position of said first and second rotors with a specified

angular tolerance, and adjust ~~adjusts~~ a rotational speed of said first rotor in response to said comparison showing that ~~when~~ said relative rotational position of said first and second rotors is outside said specified angular tolerance.

Claim 42 (Currently Amended): A vertical takeoff and landing aircraft comprising:

an aircraft fuselage;

first and second hubs mechanically coupled to said fuselage;

first and second drive systems for respectively driving said first and second hubs to rotate;

first and second rotors mechanically coupled to said first and second hubs respectively;

a first detector that generates rotor signals when a blade of said first rotor passes through a first rotational position;

a second detector that generates rotor signals when a blade of said second rotor passes through a second rotational position; and

a controller coupled to said first and second detectors to receive said rotor signals, wherein said controller is programmed to determine ~~determines~~ the relative rotational position of said first and second rotors as a function of said rotor signals, compare ~~compares~~ said relative rotational position of said first and second rotors with a specified angular tolerance, and adjust ~~adjusts~~ a rotational speed of said first rotor in response to said comparison showing that ~~when~~ said relative rotational position of said first and second

rotors is outside said specified angular tolerance.

Claim 43 (Currently Amended): A vertical takeoff and landing aircraft comprising:

an aircraft fuselage;

first and second hubs mechanically coupled to said fuselage;

first and second drive systems for respectively driving said first and second hubs to rotate;

first and second rotors mechanically coupled to said first and second hubs respectively;

first and second emitters mounted to said fuselage or mounted to a blade of said first rotor and a blade of said second rotor respectively;

a first detector that generates rotor signals in response to emissive energy from said first emitter when said blade of said first rotor passes through a first rotational position;

a second detector that generates rotor signals in response to emissive energy from said second emitter when said blade of said second rotor passes through a second rotational position; and

a controller coupled to said first and second detectors to receive said rotor signals, wherein said controller is programmed to determine ~~determines~~ the relative rotational position of said first and second rotors as a function of said rotor signals, compare ~~compares~~ said relative rotational position of said first and second rotors with a specified angular tolerance, and adjust ~~adjusts~~ a rotational speed of said

first rotor in response to said comparison showing that ~~when~~ said relative rotational position of said first and second rotors is outside said specified angular tolerance and does not adjust a rotational speed of said first rotor in response to said comparison showing that ~~when~~ said relative rotational position of said first and second rotors is within said specified angular tolerance.